4273

Diag. Cht. No 8152-1, 8252-1 & 8201-3

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

11—5613

State: Alaska

DESCRIPTIVE REPORT.

Hydro. Sheet No. 4273

LOCALITY:

W. Coast of Prince of Wales I.

Iphigenia Bay & Entr. to Sumner Strait

1922

CHIEF OF PARTY:

T. J. Maher

4273

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SMOOTH SHEET of WARREN ISLAND,

S. E. ALASKA

Scale 1:20000

U. S. S. SURVEYOR - T. J. Maher, Chief of Party.

May 23 to June 10

August 10 to September 27

1 9 2 2.

4273

DESCRIPTIVE REPORT

to accompany

Hydrographic Smooth Sheet of Warren Island, Southeastern Alaska.

LIMITS OF SHEET.

This sheet includes a hydrographic survey of Warren Cove, and the small cove North of Warren Cove; and of the Southeast coast for a distance of 1.4 miles from shore. Also a survey of the area included between longtitudes 133° 52' and 134° 00' and Latitudes 55° 46' 30" and 55° 50' 30". Also a survey of the West coast of Warren Island for a distance varying from 2 miles to 4 miles from shore.

CHARACTER OF COAST.

The shore line of Warren Island adjacent to the hydrographic survey is entirely rocky with the exception of the beach at the head of Warren Cove which is of sand. The land rises abruptly back from the shore line and is mostly heavily timbered up to the 1800 foot line. Most of the mountain tops beyond this elevation are conspicuously bare of timber. There are a large number of hills on Warren Island, varying in elevation from 1000 feet to 2367 feet.

LANDMARKS.

There are no distinctive landmarks on Warren Island, with the exception of the highest peak, 2367 feet in elevation, which lies 1.45 miles 170° (true) from △ Warren. This peak is conspicuous for long distances out to sea and is covered with snow from November to June. The remaining hills on Warren Island are not distinctive landmarks for there are so many of nearly the same elevation in the same locality.

ISLANDS.

There is a small rock island about 15 feet in elevation above mean high water, 1.45 miles 206½° (true) from △ So. In heavy weather the sea breaks completely over this rock. This is a very dangerous rock. A rock 50 feet high lies 165 meters 175° (true) from △ So. △ Lichen, ⊙ Isle and ⊙ By are on small rock islands. There is a small rock island 570 meters 291° (true) from ⊙ Mit, 15 feet above high water over which the seas break in heavy weather.

BREAKERS AND DANGERS.

The West coast of Warren Island is very foul between ⊙ Hal and △ So, rocks which bare at various stages of the tide extending out 50 meters

to 250 meters from the high water line. Similarly along the South coast there are a number of rocks which extend out 25 meters to 100 meters from the high water line and which bare at various stages of the tide. There is a rock which bares at half tide 164 meters 177° (true) from ⊙ Fast. Also a very dangerous rock which bares only at minus tides at the Northern end of the entrance to Warren Cove 147 meters 180° (true) from ⊙ To. There is a rock which bares at half tide 196 meters 238° (true) from △ Lichen; a rock which bares at low tide 276 meters 149° (true) from △ Guano; and a very dangerous rock which bares only at extreme low tide but which breaks at all times except high tide in calm weather 1218 meters 263° (true) from ⊙ Sen. A very dangerous rock which bares at three quarter tide lies 5134 meters 220° (true) from △ So. 250 meters from this rock is a sunken rock which breaks at low tide or in heavy weather 5196 meters 223° (true) from △ So. A very dangerous sunken rock which breaks at low tide and at all stages of the tide in heavy weather lies 5110 meters 198° (true) from △ So. In the vicinity of the rock island on which ⊙ Brak is located, during heavy weather, a breaker was noted twice and cuts taken to it. A close developement of this area revealed a minimum depth of about 6 fathoms, which probably was the spot at which the big seas were breaking. See Coast Pilot - p. 154

KELP.

There is a large amount of growing kelp along the West coast of Warren Island as represented on the sheet. The rocks Southeast of △ Guano, South of ⊙ To in Warren Cove, and South of ⊙ Fast are all marked by growing kelp. The Northern half of the Cove North of Warren Cove is occupied by a very dense mass of growing kelp which is impassable. There is growing kelp about the small rock island, the highest part of which was called signal Brak. Between this outlying rock and △ So, the water is comparatively shallow, and especially after a period of calm weather we have numerous strands of growing kelp in this stretch of water.

DEPTHS and BOTTOM.

The depth of water throughout this survey was very variable, the survey in general being carried out to the 100 fathom curve. On the Southeast coast it was not carried out quite to the 100 fathom curve, while on the South coast it was carried out beyond to a maximum depth of 170 fathoms. Warren Cove was developed by a system of 100 meter lines, a depth of 7 to 8 fathoms being obtained in the center of the Cove. The cove North of Warren Cove was also developed by a system of 100 meter lines, a depth of 4 to 5 fathoms being obtained in the center of the navigable part.

In Warren Cove the bottom is sand, whereas in the cove North of Warren Cove, the bottom is of soft mud. The bottom of the entire offshore area is of rock with occasionally some sand and gravel, principally confined to depths of 100 fathoms and over. The bottom is very irregular, there being numerous under water pinnacles of rock. The most critical depths obtained on the West coast was a 9 or 10 fathom spot 928 meters 258° (true) from ⊙ Blu. A close developement of this area revealed no lesser depth. Between ⊙ Brak

and △ So there is a depth of 7 to 15 fathoms with rock bottom. A close developement of this area revealed no lesser depth, nor were any breakers observed in this area during heavy weather, although the seas lump up conspicuously here. As mentioned previously a breaker was observed in heavy weather North of ⊙ Brak where close developement revealed a minimum depth of 6 fathoms. See S.P. p.184

ANCHORAGES.

Warren Cove affords anchorage for deep-draft vessels in a depth of from 7 to 9 fathoms with a hard sand bottom. This anchorage, however, is open to the Southeast, and during heavy Southeast weather, a heavy swell makes in here making Warren Cove very unsafe and undesirable as an anchorage.

The small cove North of Warren Cove affords good anchorage for small boats in a depth of 4 to 5 fathoms with mud bottom and excellent holding ground. As the anchorage here is South of the kelp patch and close to the beach a good lea from Southeast sea and swell is obtainable here, although in heavy Southeast gales the severe wind makes this place also dangerous and undesirable.

There are two small bights near the Northwest corner of Warren Island which afford temporary anchorage for small boats but are useless in any severe weather or heavy swell.

CURRENTS and TIDE RIPS.

The tidal currents on the East and West coasts of Warren Island run in the same direction, North with the flood and South with the ebb. Southwest of △ So in the shoal area between △ So and ⊙ Brak, there are heavy tide rips when the wind opposes the tide. There are moderate tide rips along the South coast between △ So and △ King and along the West coast out to about the 50 fathom curve.

Respectfully submitted,

A. G. Katz

A. G. Katz,

H. and G. Engineer.

Memorandum

To accompany Descriptive Report of Hydrographic Survey of Warren Island, S. E. Alaska.

At night, in approaching Warren Island from the southward, Warren Cove is not readily picked up. The headland to the northward shows prominently but that to the southward is low. False Cove is more readily picked up and, at night, is easily mistaken for Warren Cove. In entering Warren Cove, the southern shore is favored until the mouth of the bay is cleared. Anchorage may be had in six to eight fathoms. The statement, in the 1917 edition of the Coast Pilot, that, "It is exposed to the southeastward and a heavy swell makes in during southerly gales," is correct. The SURVEYOR has anchored there during moderately rough weather, however.

The use of False Cove is not recommended for large vessels and even smaller vessels; unless the navigators have local knowledge, Warren Cove is preferable in ordinary weather.

False Cove is a name used aboard the SURVEYOR to designate the cove on the east shore of Warren Island, about one mile north of Warren Cove.

J. Farquhar

Hydrographic Statistics - Sheet No. 5 - Warren Island, S.E. Alaska. 1922.

Date 1922	Letter	Volume	Positions	Soundings	miles statute	Vessel.
May 23	a	1	115	326	7.9	Launch #47
" 24	b	1	43	121	3.2	"
June 6	c	1	52	144	6.1	"
" 7	d	1	60	184	5.4	"
" 8	e	2	81	229	10.9	"
" 9	f	2	75	194	8.7	"
" 10	g	2	51	131	6.2	"
Aug. 10	a	1	9	17	1.6	COSMOS
" 11	b	1	164	317	25.9	"
" 12	c	1	27	52	5.6	"
" 15	d	1	128	237	20.8	"
" 16	e	1	49	92	6.3	"
" 17	f	2	32	63	5.4	"
" 18	g	2	177	348	25.8	"
" 19	h	2	55	104	11.2	"
" 23	j	2-3	132	257	24.0	"
" 24	k	3	114	214	18.9	"
" 25	l	3	42	77	6.8	"
" 26	m	3	48	94	9.0	"
" 28	n	3	49	93	7.0	"
" 29	p	3-4	119	230	23.9	"
" 30	q	4	54	103	10.1	"
" 31	r	4	81	154	19.2	"
Sep. 1	s	4	47	63	9.8	"
" 5	t	4	68	128	11.8	"
" 6	u	4-5	118	211	18.0	"
" 7	v	5	46	83	4.6	"
" 11	w	5	119	227	13.9	"
" 12	x	5	160	281	19.5	"
" 13	y	6	165	280	18.0	"
" 14	z	6	30	56	3.6	"
" 15	aa	6	50	91	6.9	"
" 16	bb	6	63	108	8.7	"
" 18	cc	6-7	118	212	14.5	"
" 19	dd	7	108	214	16.2	"
" 20	ee	7	117	225	19.6	"
" 21	ff	7	86	156	14.3	"
" 25	gg	7-8	73	134	11.9	"
" 26	hh	8	145	240	18.3	"
" 27	jj	8	79	141	9.2	"
	Total.		3349	6631	488.7	

C.I.C.

COPY TO FIELD RECORDS

May 19, 1923.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in volumes of sounding records for 19

HYDROGRAPHIC SHEET 4373

Locality: Warren Id., Alaska

Chief of Party: W. J. Mahoney in 1922

Plane of reference is mean lower low water, reading 2.0 ft. on tide staff at Steamboat Bay.
auto.gauge

For reduction of soundings, condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

G. R. Putnam

Chief, Division of Tides and Currents.

Report on Hyd. Sheet 4273
Surveyed in 1922.

1. The character and completeness of records are satisfactory.

2. The protracting was done by two field men and only in a very few instances the work was inaccurate. Mention may be made at this point that the prick holes in a part of the protracting were altogether too large and difficulty was experienced especially in crowded soundings in inking the figures.

3. The plotting was very good and the time intervals carefully adhered to.

4. The area covered appears sufficiently developed. The breakers are well defined, also the appearance of kelp seems not to have escaped observation. The work in general appears very commendable.

5. The general condition of sheet was clean and the work legible.

Respectfully submitted,
E. Ruegg.

ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 4-DRM

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

July 2, 1924.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4273

Iphigenia Bay, Alaska

Surveyed in 1922

Instructions dated February 25, 1922.

Chief of Party, T. J. Maher.

Surveyed by A. G. Katz.

Portracted by A. W. Skilling and W. O. Manchester

Soundings plotted by H. R. Edmonston

Verified and inked by G. Risegari.

1. The records conform to the requirements of the General Instructions. The use of the word "Same" when the same objects are used in successive positions is objectionable.

2. The plan and character of development conform to the requirements of the General Instructions.

3. The plan and extent of development satisfy the specific instructions.

4. The sounding line crossings are generally adequate.

5. The information is sufficient for drawing the usual depth curves.

6. Only the protracting was done by the field party. It was satisfactory except that in many cases the protractor holes were pricked too large which made inking difficult.

7. Owing to the incomplete state of the adjoining sheets the character of the junctions cannot be stated.

8. The area covered by this sheet is well developed and no further leadline surveying is required. There are numerous indications of dangers, however, which can only be cleared up with the drag.

9. The character and scope of the surveying are excellent and the field drafting good.

10. Reviewed by E. P. Ellis, June, 1924.

Form 537
11—615

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. (#5)# 4273

State . . . . ALASKA

General locality . . . . W. Coast of Prince of Wales I [redacted]A

Locality . . . . Iphigenia Bay + Entrance to Sumner Strait [redacted]

Chief of party . . T.J.Maher

Surveyed by . . . A.G.Katz

Date of survey * May 8 to June 10 and August 10 to Sept. 27 - 1922

Scale 1:20000

Soundings in

Plane of reference . Mean lower low water

Protracted by A.W.S.&W.C.M. Soundings in pencil by . — H.C. Ainsworth

Inked by . . . — . . . . Verified by . . . . . —

Records accompanying sheet (check those forwarded):

Des. XX report, ... Tide books, ... Marigrams, ..2.. Boat sheets,

..10.. Sounding books, ... Wire-drag books, ... Photographs.

Data from other sources affecting sheet

Remarks:

* Descriptive Report gives May 23d to June 10 ~~th~~ instead of May 8 th to June 10

Trans. letter gives field no. for this sheet as (#5.)